

### REMARKS

Claims 1, and 3-15 are pending in this application. Claim 1 is amended to more distinctly claim the subject matter therein. Claim 15 has been canceled by this response. Applicants submit that no new matter has been added by this response.

Claims 1, 3-7 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No.: 7,161,972, to Huh et al. (hereinafter as "Huh") in view of US Patent No.: 6,255,898, to Ono et al. (hereinafter as "Ono"). Applicants respectfully traverse the rejections, and requests reconsideration and allowance of these claims in view of the following arguments.

### REJECTIONS UNDER 35 U.S.C. § 103

Claims 1, 3-7 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Huh in view of Ono. Claim 15 has been canceled by this response.

Claim 1 is directed to a channel estimator using a CIR (channel impulse response) estimating value, and adopting signal masking for removing noise included in the CIR estimating value. Amended claim 1 recites, "wherein the CIR estimating value is generated by detecting a maximum value of a cross correlation value between a received signal and a trained sequence, and operating a cross correlating vector generated by using the maximum value and the inverse matrix of an auto correlating value of the trained sequence."

Applicants respectfully submit, Huh does not teach or suggest the above identified features of claim 1. Specifically, Huh fails to disclose the CIR estimating value includes a cross correlation value between a received signal and a trained sequence, a

cross correlating vector generated by using the maximum value, and the inverse matrix of an auto correlating value of the trained sequence.

In review of the Huh reference, column 5, lines 31-45 (relied upon by the Office Action):

"The receiver provides the received signal to a channel estimator 219 and a channel equalizer 220 through an RRC filter 218. *The channel estimator 219 performs channel estimation on a channel impulse response of the multipath fading channel, and provides the channel-estimated results to the channel equalizer 220.* The channel equalizer 220 compensates for multipath channel fading of the received signal using the estimated channel impulse response, thereby to remove multipath interference from the received signal. The signal output from the channel equalizer 220 is provided to a single-user detector 222. The single-user detector 222 despreads the signal output from the channel equalizer 220 with an i.sup.th user's spreading code and a scrambling code output from a multiplier 221, thereby to detect an i.sup.th user's data sequence."  
(emphasis added)

Applicants assume *arguendo* that Huh, as indicated in the Office Action, discloses a "channel estimator." However, even if this is correct, Huh is deficient as an anticipating reference for it's failure to teach or suggest the above-identified features of claim 1.

Huh col. 9, lines 3-16, recites "the channel estimator 319 performs channel estimation on a channel impulse response of the multipath fading channel, and provides the channel-estimated results to the deconvolution channel equalizer 320." However, Huh fails to disclose the generation of the channel response estimator. Huh does not teach or suggest all of the elements of claim 1, therefore, claim 1 is patentable over Huh.

Applicants further submit that Ono fails to cure the deficiencies of Huh, with regards to "CIR estimating value generation." Therefore, Applicants respectfully submit that even if the references were combined in the manner asserted, the invention of claim 1 would not be achieved. Claim 1 is believed to be patentable over Huh in view of Ono. Accordingly, it is believed that dependent claims 3-7 are patentable at least by virtue of dependence from independent claim 1.

#### ALLOWABLE SUBJECT MATTER

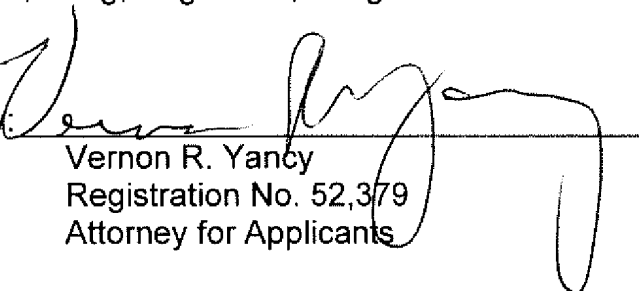
Applicants acknowledge, with appreciation, the Examiner's assertion that claims 8-14 are allowed.

#### CONCLUSION

In view of the foregoing, it is respectfully submitted that the application and the claims are in condition for reconsideration on the merits, thus reexamination of the application is requested. The Examiner is invited to call the undersigned attorney at (213) 623-2221 should the Examiner believe a telephone interview would advance the prosecution of the application.

Respectfully submitted,

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